REMARKS

Claims 1, 5, 6, 12, 15-21, 23-28, 30-33, 35, 37 and 39 are pending. See Applicants' Amendment filed in October 2005 for a full list of the pending claims of the present application. For the reasons stated below, Applicants respectfully request reconsideration of the §103(a) rejection stated in the non-final Office Action of November 2, 2005 and submit that the present application is in condition for allowance.

Claim Rejections Under 35 USC §103(a)

> In the non-final Office Action dated November 2, 2005, claims 1, 5, 6, 12, 15-21, 23-28, 30-33, 35, 37 and 39 are rejected under 35 USC §103(a) as being obvious over U.S. Patent No. 4,927,677 issued to Kasai in view of U.K. Patent Application Publication No. GB 2295617 A of Branch and in further view of U.S. Patent No. 4,888,222 issued to Gibbons et al.

In the Office Action, the Examiner states that the Gibbons patent teaches "the interchangeability of a vinylidene chloride copolymer and nylon as a barrier material". Thus, the Examiner concludes that it "would be obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided a barrier layer comprising nylon in Kasai".

In addition, the Examiner admits in the Office Action that the Kasai patent fails to disclose a further layer filled with 5 to 15% talc by weight. However, the Examiner concludes that it "would be obvious for one of ordinary skill in the art to vary the amount of talc in order to obtain the desired thermal resistance".

Applicants respectfully disagree with both of the Examiner's above stated conclusions, and accordingly, request reconsideration of the above stated §103(a) rejection for each of the reasons presented below.

Incompatibility of Kasai and Gibbons

The Kasai patent relates to materials for use in plastic retort containers. It is clear that all containers described in Kasai must have a biaxially stretched film of a copolymer resin of vinylidene chloride and an acrylic ester. The Kasai patent specifically identifies certain materials on column 1, lines 22-37, that are unsuitable for use in plastic retort containers.

As a skilled person would appreciate, the retorting process (which produces retort containers) involves providing an unsealed container, placing food or other substance in the container, heating the container to sterilize it and its contents, and sealing the container at the raised temperature. The food in the container will remain sterile and will not deteriorate, as long as microorganisms and/or oxygen are prevented from entering the container.

Not all plastics are suitable for use in making retort containers in view of the length of time the packaging must be exposed at high temperature under the sterilization conditions. In particular, ethylene-vinyl alcohol is described in Kasai as an undesirable material for use as an oxygen barrier in a retort container. (See column 1, lines 22 to 37, of the Kasai patent.) Ethylene-vinyl alcohol is unsuitable because its oxygen permeability is much higher following retort treatment, presumably because the ethylene-vinyl alcohol absorbs water at the high sterilization temperatures. For example, the Kasai patent states that a composite using ethylene-vinyl alcohol as an oxygen barrier may have an oxygen gas permeability of 0.5 cc/m^2-24 hrs-atm before retort treatment and an oxygen gas permeability of 18 to 24 cc/m^2-24 hrs-atm after retort treatment.

In contrast to plastic retort containers, the Gibbons patent is directed to making gable-top or flat-top paperboard cartons that are for use in containing food or non-food substances and

that provide a barrier to the transmission of oxygen. The materials used to make the paperboard cartons must be able to withstand the carton manufacturing process and still provide an oxygen-impermeable package without breaks, holes, cracks or the like through the oxygen barrier layer.

One of skill in the art can see from column 1, lines 27 to 40, of the Gibbons patent that not all impermeable materials are suitable for use in paperboard cartons. For example, Gibbons teaches:

> "It is well known that impermeable materials such as aluminum foil, polar brittle materials such as: polyacrylonitriles, polyvinylidene chlorides, polyvinyl chlorides, etc. provide varying degrees of barrier to the transfer of oxygen. However, all these materials lack the requisite strength at high rates of deformation, namely stress cracking resistance during scoring, package formation and distribution abuse to provide a resultant oxygen impermeable and airtight structure." [Emphasis added.]

Further, the Gibbons patent teaches that polyvinylidene chlorides and EVOH are different. Note that EVOH is not recited in the above recitation from Gibbons as a brittle material, and note FIG. 2 of Gibbons in which the oxygen barrier material (30) is required to be sandwiched between protective caulk layers (28, 32) whereas the EVOH layer (49) is not.

As a first argument for unobviousness of the claims of the present application, Applicants respectfully submit that there is no motivation disclosed in the recited prior art for combining the Kasai and Gibbons patents or for making a change to the Kasai container according to the teachings of Gibbons. Gibbons simply lists possible barrier materials only in the context of making gable-top or flat-top paperboard cartons. The Gibbons patent absolutely fails to teach, suggest or disclose that a biaxially stretched film of a copolymer resin of vinylidene chloride and an acrylic ester can be replaced with a layer of ethylene-vinyl alcohol in the context of a plastic retort container. Accordingly, one of skill in the art at the time the present invention was made

would not have combined the teachings of Kasai and Gibbons, or modified Kasai in view of Gibbons, as suggested by the Examiner in the Office Action.

As a second argument for unobviousness of the claims of the present application, Applicants respectfully submit that a reference cannot be properly combined with another reference if its function is changed or destroyed. The Kasai patent clearly discloses on column 1, lines 27-49, that ethylene-vinyl alcohol deteriorates under retort conditions and its oxygen gas permeability is altered to unacceptable levels as a result of retort processing. The stated goal of the Kasai patent is "to provide a composite material container for a retort container which has good gas and vapor barrier properties which are not lowered when the material undergoes a retort treatment." See column 2, lines 25-29, of the Kasai patent. Accordingly, to combine the teachings of these references as required by the Examiner in the Office Action would clearly destroy and significantly change the desired function of the Kasai retort container as admitted directly within the specification of the Kasai patent. One of skill in the art would therefore avoid such a combination.

As a third argument for unobviousness of the claims of the present application, Applicants respectfully submit that the prior art teaches away from the invention claimed in the present application. The Kasai patent clearly states that ethylene-vinyl alcohol deteriorates under retort conditions and its oxygen gas permeability changes to unacceptable levels as a result of retort processing. Accordingly, the Kasai patent teaches away from replacing a biaxially stretched film of a copolymer resin of vinylidene chloride and an acrylic ester with a layer of ethylene-vinyl alcohol. Thus, one of skill in the art would avoid such a replacement.

Furthermore, there is no suggestion in Kasai that the biaxially stretched film of a copolymer resin of vinylidene chloride and an acrylic ester could be replaced with any material. In addition, Applicants respectfully submit that the combination of Kasai and Gibbons is unrealistic in view of the incompatibilities that would have been obvious to a person skilled at the art at the time the present invention was made. Applicants submit that vinylidene chloride is not equivalent to polyvinyl alcohol and that it is wrong to conclude that vinylidene chloride is equivalent to, or interchangeable with, nylon.

As mentioned above, the plastic retort material in Kasai comprises as an essential feature a biaxially stretched film of a copolymer resin of vinylidene chloride and an acrylic ester. However, one of skill in the art is taught by Gibbons that polyvinylidene chlorides are brittle materials that should not be used by themselves as an oxygen barrier in paperboard cartons due to cracking of these layers during manufacture of the cartons. Thus, for this reason, one of skill in the art would avoid combining these references.

Additionally, Kasai describes ethylene vinyl alcohol as an unsuitable material for use as a barrier material in a retort container, whereas Gibbons lists it as a possible material in a paperboard carton. A conflict between the teachings of Kasai and Gibbons arises because they are directed to different types of packages made under significantly different conditions. One of skill in the art at the time the present invention was made would not combine the teachings of these references. Applicants respectfully submit that the §103(a) rejection stated in the Office Action is merely picking and choosing selective conflicting teachings from these references based on the benefit of hindsight having considered the specification of the present application, and not on the basis of the references taken by themselves.

For the above stated reasons, Applicants respectfully request reconsideration and removal of the §103 rejection of claims 1, 5, 6, 12, 15-21, 23-28, 30-33, 35, 37 and 39 of the present application on the combination of the Kasai patent in view of the GB Branch reference and in further view of the Gibbons patent.

Specific Use of 5% to 15% by Weight of a Platelet Filler

As readily admitted by the Examiner in the Office Action, the Kasai patent clearly fails to disclose, teach or suggest the limitation in the independent claims of the present application with respect to the claimed "further layer" consisting of a non-polar thermoplastic polyolefin resin filled with 5% to 15% by weight of a platelet filler. Rather, the disclosure of the Kasai patent is limited to the use of a film layer made from a blend of polypropylene with 25 wt% to 35 wt%, preferably 30 wt%, of an inorganic talc filler. (See column 4, lines 59-62, of the Kasai patent). Accordingly, the Kasai patent clearly fails to disclose the limitation of 5% to 15% by weight of a platelet filler.

In the Office Action, the §103(a) rejection simply overlooks this required limitation by stating that Kasai "teaches the selection of the amount of talc depending on the desired thermal resistance (column 3, lines 9-17)". Applicants respectfully submit that there is no such statement made in Kasai. Kasai simply states that "propylene resins blended with inorganic talc fillers are stable over a temperature of from -30° to 130°C."

There is no indication provided by the Kasai patent that the polypropylene layer in Kasai can have a relatively low amount of talc, 5 to 15% by weight, as required by the independent claims of the present application. The only amounts disclosed in the Kasai patents is that talc

content be from 25 to 35% by weight, or preferably 30% by weight. Accordingly, there is no teaching, suggestion, or disclosure in Kasai to motivate one of skill in the art to decrease the amount of talc disclosed by Kasai to 5 to 15% by weight.

For the above stated reason, Applicants respectfully request reconsideration and removal of the §103 rejection of claims 1, 5, 6, 12, 15-21, 23-28, 30-33, 35, 37 and 39 of the present application on the combination of the Kasai patent in view of the GB Branch reference and in further view of the Gibbons patent.

Three-part Combination of Kasai/Branch/Gibbons

According to the rejection in the Office Action, a person of skill in the art at the time the present invention was made must pick and choose from and combine the above three references before arriving at the claimed invention. The requirement of the use of three references to make the above stated obviousness rejection, by itself, indicates that the claims are unobvious and patentable. Kasai is directed to plastic retort containers that are subjected to harsh sterilization treatments. In contrast, Gibbons is directed to paperboard cartons that are subjected to scoring, package formation and like mechanical stresses. Applicants respectfully submit that one of skill in the art at the time the present invention was made would not have picked conflicting teachings from these references and altered the laminated materials to arrive at the present invention. Applicants submit that such a combination is based improperly on hindsight analysis.

Required Thickness of Talc-Filled "Further Layer"

The argument below was submitted by the Applicants in the Applicants' previously filed Amendment and was not responded to in the Office Action dated November 2, 2005. Reconsideration is requested.

Dependent claims 18, 19, 30, 31 and 33 of the present application require the claimed platelet-filled "further layer" to have a thickness of 5 to 150 microns, 20 to 150 microns, 10 to 70 microns, or 50 microns. The Examiner rejects the above referenced claims relying specifically on the disclosure on column 5, lines 13-19, of the Kasai patent.

The thickness of the talc-filled layer disclosed by the Kasai patent is significantly thicker than that claimed by the present application. The Kasai patent at column 5, lines 20-23, discloses a thickness for the "blended polypropylene film (4)" of 400 to 900 microns, or more preferably, 600 to 700 microns. The Kasai patent clearly fails to disclose a thickness of 50 microns for the blended polypropylene film (4) as suggested by the §103(a) rejection.

Column 5, lines 13-19, of the Kasai patent, which is cited and solely relied upon by the Examiner to reject claims 18, 19, 30, 31 and 33 of the present application, states the thickness for the non-platelet filled polypropylene film (2), not the blended (platelet-filled) polypropylene film (4). Column 5, lines 13-19, of the Kasai patent does not provide any information on the thickness of the platelet-filled polypropylene film (4).

Accordingly, Applicants respectfully submit that the Kasai patent fails to disclose the limitations of claims 18, 19, 30, 31 and 33. Reconsideration is respectfully requested.

High Density Polyethylene Talc-Filled Layer

The argument below was also submitted by the Applicants in the Applicants' previously filed Amendment and was not responded to in the Office Action dated November 2, 2005. Reconsideration is requested.

Dependent claims 20, 21, 37 and 39 of the present application require the claimed non-polar thermoplastic polyolefin resin of the platelet-filled further layer to be high density polyethylene. In the Final Office Action, the Examiner rejects the above referenced claims relying specifically on the disclosure on column 6, lines 56-60, of the Kasai patent.

As illustrated in FIG. 9 of the Kasai patent, the opening of the container (10) is closed by heat sealing a sheet cover (12) to the rim of the container. The structure of the sheet cover (12) is illustrated in FIGs. 7 and 8 and is discussed in detail on column 6, line 30, to column 7, line 26, of the Kasai patent. The laminated structure of the sheet cover (12) does not include a talc-filled layer. Rather, it includes a biaxially stretched film (6) of a copolymer resin of vinylidene chloride and an acrylic ester, a sequentially biaxially stretched film (7) of nylon 6, a heat-sealable heat-resistant plastic film (8), and an optional biaxially stretched film (9) of nylon 6.

Column 6, lines 56-60, of the Kasai patent, which is cited and solely relied upon by the Examiner to reject claims 20, 21, 37 and 39 of the present application, states that the heat-sealable heat-resistant plastic film (8) of the cover sheet (12) may be plastic films made by blends of polypropylene and other polyolefins. However, plastic film (8) of the cover sheet (12) does not include a talc-filled layer as required by the claims of the present application.

Accordingly, Applicants respectfully submit that the Kasai patent fails to disclose the limitations of claims 20, 21, 37 and 39. Reconsideration is respectfully requested.

Conclusion

In view of the above remarks, Applicants respectfully submit that the §103(a) rejection has been overcome and that the present application is in condition for allowance. A favorable action on the merits is therefore requested.

Please charge any deficiency or credit any overpayment for entering this Response to our deposit account no. 08-3040.

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